Development Environment Quick Start Guide

December 3, 2010 version

Setting Up the NDEV

Please see the NDEV Software Manual for information on connecting the NDEV to your PC.

Installing Cygwin

1.) Download setup.exe from www.cygwin.com.
2.) Run setup.exe.
3.) Press the "Next" button.
4.) Select "Install from Internet" and press "Next".
5.) Leave the "Root Directory" field as C:\cygwin. The "Install For" settings can also be left as is. Press "Next".
6.) In the "Local Package Directory" field browse to the location to which you want the installer to download its packages. This can be left as is unless you have some reason to change it. Press "Next".
7.) Select "Use IE5 Settings" and press "Next".
8.) The next screen will list mirror download sites. Generally the one pre-selected by the installer will work well enough. Press "Next" again.
9.) The next screen will allow you to select what packages to install, but you will only need the default ones. Press "Next" to install.
10.) Press "Finish" to complete the install.
11.) Download the make-3_80_1_071029.zip package from WarioWorld.
12.) Extract the make package somewhere like C:\temp.
13.) Copy the make.exe file from the make package into C:\cygwin\bin.
14.) Download the openssl-0_9_8b-1-070316.zip package from WarioWorld.
15.) Extract the openssl package somewhere like C:\temp.
16.) Run setup.exe again and press "Next".
17.) Select "Install from Local Directory" and press "Next".
18.) Verify that the "Root Directory" field is pointed to C:\cygwin and press "Next".
18.) In the "Local Package Directory" field browse to the location where the openssl package was extracted to (e.g. C:\temp\openssl-0_9_8b-1) and press "Next".
19.) In the "Select Packages" tree view there should only be a "Misc" tree. Expand the tree and find "openssl". Click the item in the "New" column until it reads "Install", then click the "Next" button.
20.) Click "Finish" to close the installer.

Installing NDEV Tools

1.) Download the NDEV-20100303.zip package from WarioWorld.
2.) Extract the NDEV package somewhere like C:\temp.
3.) In the ND-Installer-100303 sub-directory, run the Setup.exe application and follow the installer instructions.

Installing NDEV Drivers

Note 1: Skip this if the PC does not have an NDEV attached.
Note 2: If you are running 64-bit Vista, simply use the 64-bit driver installer instead of following the steps below.

1.) Make sure that all three USB cables from the NDEV are plugged into the PC and turn on the NDEV unit.
2.) Windows will automatically detect the hardware and start the Hardware Wizard. Point the wizard at the ND-Drivers-070625 directory from the NDEV-20100303 package. The wizard will activate three times in a row. Point it at the same folder each time.

Installing the SDK

1.) Download the RVL_SDK-3_3-2-20100823a.zip package from WarioWorld.
2.) Extract the package somewhere like C:/RVL_SDK.
3.) Right-click on the RVL_NDEV.bat file in the root folder of the SDK and select Edit.
4.) Near the top of the file, change the paths for REVOLUTION_SDK_ROOT and CYGWIN_PATH to the locations where the SDK and Cygwin are located.

Setting the REVOLUTION_SDK_ROOT Environment Variable

1.) Open the Windows System Properties dialog by right-clicking My Computer and selecting “Properties” or by holding the Windows key and pressing Pause/Break.
2.) Select the “Advanced” tab and click the “Environment Variables” button.
3.) In the “System Variables” area of the dialog, press the “New” button.
4.) In the “Variable name” box enter REVOLUTION_SDK_ROOT.
5.) Enter the path to the RVL_SDK in the “Variable value” box, e.g. C:\RVL_SDK.

Note 1: If you do not have administrator rights on the machine, then you will not be able to enter the environment variable as a system variable. You can enter it as a user variable, but it will need to be set for each user that logs into the machine.

Running Cygwin and Setting the Dvdroot

1.) Run the “RVL_NDEV.bat” file found in the root folder of the RVL SDK. This will open a cygwin prompt.
2.) If cygwin instructs you to execute the following commands then do so. They will take a few minutes to complete:

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mkpasswd –l –d > /etc/passwd
mkgroup –l –d > /etc/group
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Updating the Firmware

Note 1: Skip this if the PC does not have an NDEV attached.

Note 2: Do not turn off the NDEV, stop the ODEM software on the PC, or run any other software on the NDEV until the update is complete or else the NDEV may be rendered inoperable.

1.) With the NDEV unit powered on, run the "RVL_NDEV.bat" file found in the root folder of the RVL SDK. This will open a cygwin prompt.
2.) In the cygwin prompt, type fwupdate_56.21.29_us. The firmware update software will be started on the NDEV kit.
3.) Follow the on-screen instructions to start the firmware install.
4.) Wait for the message "SWUpdate Successful" (on the TV) before running other programs or powering off.

Note 3: This will update the NDEV with the latest version of the firmware: 56.21.29. However, we recommend that you also run the Firmware All Installer that you can find on WarioWorld (RVL-FirmwareALL_Installer-20081121.zip). This will install older versions of the firmware so you can run tools and programs that were built with older firmwares. You can extract this package over the RVL SDK and execute fwupdate_all_us in a cygwin prompt to execute it.

Verify the SDK Install

Note 1: Skip this if the PC does not have an NDEV attached.

1.) With the NDEV unit powered on, run the "RVL_NDEV.bat" file found in the root folder of the RVL_SDK. This will open a cygwin prompt.
2.) In the prompt, execute SetNdEnv DvdRoot $REVOLUTION_SDK_ROOT/dvddata.
3.) In the prompt, execute
ndrun $REVOLUTION_SDK_ROOT/RVL/bin/demos/gxdemo/smp-onetri.elf.
4.) After a few seconds you should see the demo run on the TV. It looks like a camera flying through a bunch of steel girders.